

METALLURGIA

THE BRITISH JOURNAL OF METALS

Index to Vol. XX.
May, 1939—October, 1939.

KENNEDY PRESS LIMITED
— 21, Albion Street —
GAYTHORN, MANCHESTER 1

INDEX

A		C		D	
	Page		Page		Page
Alloys, Experiments with Nickel-Chromium Wear-Resisting Cast Iron. By J. E. Hurst.....	1-4	Cast Iron Alloys, Experiments with Nickel-Chromium Wear-Resisting. By J. E. Hurst.....	1-4	Developments in Electric Billet-Heating Furnaces for Extrusion Presses. By Dr.-Ing. H. Lindner.....	53-56
Alloy Steels Research Committee, Second Report of the.....	8-9	Control, Industrial Management and Production, Part VII. Control of Wages. By F. L. Meyenberg.....	5-7	Development, Research and.....	91
Atmospheres in Heat-treatment Processes, Controlled. By F. W. Haywood, B.Sc., Ph.D., F.I.C.....	13-19	Controlled Atmospheres in Heat-Treatment Processes. By F. W. Haywood, B.Sc., Ph.D., F.I.C.....	13-19	Development of Alloy Steels, Trends in the. By Ed. Houdremont.....	121-123
An Industrial Boom.....	51	Cast Iron by Hardening and Tempering, The Heat-Treatment of. By J. E. Hurst.....	19-22	Determination of the Yield Point for Mild Steel, Influence of the Resiliency of the Test Machine and of the Loading Speed upon. By G. Welter and S. Gockowski.....	143-148
Alloys, Grain Size of Copper Nickel. By W. F. Chubb, Ph.D., B.Sc.....	79-80	Control, Potentiometers as a Means of Temperature Measurements and. By W. R. L. Kent, B.A., A.M.I.E.E., A.M.I.Mech.E.....	31-34		
Additions to Cast Iron, Silicon-Carbide.....	83	Control, Industrial Management and Production. Part VIII. By F. L. Meyenberg.....	59-62	E.	
Aluminium Alloys in the United States, Standardised. By R. J. Anderson, D.Sc.....	93-94	Congress, International Foundry.....	63-72	Experiments with Nickel-Chromium Wear-Resisting Cast-Iron Alloys. By J. E. Hurst.....	1-4
Aid to the Production of Sound Castings, Chemistry as an. By E. Altenhein, D.Eng.....	99-100	Congress Works Visits, Post.....	73-76	Emulsion and Its Contribution to Science and Industry, The Photographic.....	9
Automobile and Aeronautical Industries, Steels in the. By W. H. Hatfield, D.Met., F.R.S.....	107-108	Construction and Operation of the First German Wide Strip Mill.....	77-78	Eighth Report of the Heterogeneity of Steel Ingots.....	44
Applications of Steel Tubing. By a Special Contributor.....	109-110	Carburising Compounds.....	78	Electric Billet-Heating Furnaces for Extrusion Presses, Developments in. By Dr.-Ing. H. Lindner.....	53-56
Alloy Steels, Trends in the Development of. By Ed. Houdremont.....	121-123	Copper-Nickel Alloys, Grain Size of. By W. F. Chubb, Ph.D., B.Sc.....	79-80	Engineering, Steels in Structural. By Wm. Ashcroft.....	129-132
Application of Alloy Cast Irons to Crushing and Grinding Machinery, The. By L. Sanderson.....	126	Cast Iron, Silicon-Carbide Additions to.....	83	Engineering, Steels in Marine.....	165
Advantages of Heat-Treatable Aluminium Bronze-Rod, The. By E. E. Halls.....	135-136	Chemistry as an Aid to the Production of Sound Castings. By E. Altenhein, D.Eng.....	99-100	Elastic Properties of Cast Iron.....	213-214
Aluminium Alloys in the United States, Standardised. By R. J. Anderson.....	140-142	Canning Industry, Timplade and the. By W. E. Hoare, B.Sc.....	105-106		
Alloys, Recent Russian Research on Copper. By A. Behr, B.Sc.....	157-158	Cast Irons to Crushing and Grinding Machinery, Applications of. By L. Sanderson.....	126	F	
Alloys, Machinability of Some Ferrous Metals and.....	187-189	Containers for Synthetic Resins.....	132	Furnace Installations, Some Recent Heat-Treatment.....	23-30
Aluminium Alloys in the United States, Standardised. By R. J. Anderson.....	189-191	Creep Resistance.....	133	Furnaces, Refractories for Heat-Treatment, Specially Contributed.....	35-36
Annealing Plant at Arthur Lee and Sons, Ltd. Continuous and Batch Type Bright.....	195-196	Control, Industrial Management and Production. Part IX. Improvement of Organisation and Production by Means of Modern Methods of Industrial Administration. By F. L. Meyenberg.....	137-139	Furnaces for Extrusion Presses, Developments in Electric Billet Heating. By Dr.-Ing. H. G. Lindner.....	53-56
Aluminium and Highland Water Power.....	209-210	Caustic Soda, Treating Cast Iron with.....	153-154	Fuels for Heat-Treatment Furnaces. By Wm. Ashcroft.....	57-58
Anodic Coating of Aluminium Alloys.....	210-211	Copper Alloys, Recent Russian Research on. By A. Behr, B.Sc.....	157-158	First Report on Refractory Materials Foundry Congress, The International.....	63-72
Automatic Control of Gas-Fired Wire Heat-Treatment Furnaces. By O. G. Pamely-Evans, B.Sc., F.I.C.....	217-218	Control, Industrial Management and Production. Part X. Planning and Progressing. By F. L. Meyenberg.....	163-165	First German Wide-Strip Mill, Construction and Operation of the.....	77-78
Aluminium Control.....	222	Clydeside, Some Works on.....	180-184	Free - Machining Lead - Bearing Steels.....	95-98
		Continuous and Batch Type Bright Annealing Furnace at Arthur Lee and Sons, Ltd.....	195-196	Forthcoming Meetings.....	134
B		Chemical Standard, A New British.....	198	Furnaces, Automatic Control of Gas-Fired Wire Heat-Treatment. By O. G. Pamely-Evans, B.Sc., A.I.C.....	217-218
Boom, An Industrial.....	51	Control, Industry and Supply.....	199		
Billet Heating Furnace for Extrusion Presses, Developments in. By Dr.-Ing. H. G. Lindner.....	53-56	Control, Industrial Management and Production Control. Part XI. Planning and Progressing. By F. L. Meyenberg.....	203-206	G	
Brancepeth, New Pulverised Fuel Works at.....	81-83	Coating of Aluminium Alloys, Anodic.....	210-211	German Wide-Strip Mill, Construction and Operation of the First.....	77-78
British Non-Ferrous Metals Research Association, New Laboratories for the.....	87-89	Cast Iron, Elastic Properties of.....	213-214	Grain Size of Copper-Nickel Alloys. By W. F. Chubb.....	79-80
British Railways, Steels used in the. By T. H. Turner.....	103-104	Corrosion of Metals in Phosphorus-Producing Plant.....	214	Grinding Machinery, Application of Alloy Cast Iron to Crushing and Grinding. By L. Sanderson.....	126
Bronze-Rod, The Advantages of Heat Treatable. By E. E. Halls.....	135-136	Control of Gas-Fired Wire Heat-Treatment Furnaces. By O. G. Pamely-Evans, B.Sc.....	217-218	Germany's Navy.....	162
Business as Usual.....	162	Control and Maximum Prices in the Iron and Steel Industry.....	220-221	Grading Scheme, Pig Iron.....	200
Batch Type Bright Annealing Furnace at Arthur Lee and Sons, Continuous and.....	195-196	Control, Non-Ferrous Metal.....	222	Germany's Iron and Steel Industry, Raw Materials in.....	215-216
British Chemical Standard, New.....	198	Control, Aluminium.....	222	Gas-Fired Wire Heat-Treatment Furnaces, Automatic Control of. By O. G. Pamely-Evans, B.Sc., F.I.C.....	217-218

H	Page
Heat-Treatment	11
Heat-Treatment Processes, Controlled Atmospheres in. By F. W. Haywood, B.Sc., Ph.D., F.I.C.	13-19
Heat-Treatment of Cast Iron by Hardening and Tempering. By J. E. Hurst	19-22
Heat-Treatment Furnace Installations, Some Recent	23-30
Heat-Treatment Furnaces, Refractories for. Specially Contributed.	35-36
Heterogeneity of Steel Ingots. Eighth Report of	44
Heating Furnaces for Extrusion Presses, Developments in Electric Billet. By Dr.-Ing. H. Lindner.	53-56
Heat-Treatment Furnaces, Fuels for. By Wm. Ashcroft	57-58
Heavy Works Plant, the Use of Steel in. By W. Reid	125-126
Heat-Treatable Aluminium Bronze-Rod, The Advantages of. By E. E. Halls	135-136
Heterogeneity of Steel Ingots. Ninth Report of the	178-179
Highland Water Power, Aluminium and	207-208
Heat-Treatment Furnaces, Automatic Control of Gas-Fired Wire. By O. G. Pameley-Evans, B.Sc., F.I.C.	217-218
I	
Industrial Management and Production Control. Part VII. Control of Wages. By F. L. Meyenberg.	5-7
Industry, Photographic Emulsion and Its Contribution to Science and	9
Installations, Some Recent Heat-Treatment Furnace	23-30
Iron and Steel Institute, The	39-43
Ingots, Eighth Report of Heterogeneity of	44
Industrial Boom, An	51
Industrial Management and Production Control, Part VIII. By F. L. Meyenberg	59-62
International Foundry Congress	63-72
Iron to Crushing and Grinding Machinery, Application of Alloy Cast. By L. Sanderson	126
Industrial Management and Production Control. Part IX. Improvement of Organisation and Production by Means of Modern Methods of Industrial Administration. By F. L. Meyenberg	137-139
Influence of the Resiliency of the Test Machine and of the Loading Speed upon the Determination of the Yield Point of Mild Steel. By G. Welter and S. Gockowski.	143-148
Internal Strains in Metals.	149-150
Iron with Caustic Soda, Treating Cast	153-154
Industry, The Radium	154
Industrial Management and Production Control. Part X. Planning and Progressing. By F. L. Meyenberg	163-165
Iron and Steel Production in South Wales	166-172
Iron and Steel Institute	173-177
Ingots, Ninth Report on the Heterogeneity of Steel	178-179
Institute of Metals, The	184-186
Industry and Supply Control	199
Iron Grading Scheme, Pig	200
Industrial Management and Production Control. Part X. Planning and Progressing. By F. L. Meyenberg	203-206
Iron and Steel Industry, Raw Materials in Germany's	207-208
Iron, Elastic Properties of Cast.	213-214
Iron and Steel Industry, Control and Maximum Prices in the.	220-221

L	Page
Laboratories of the Association Anon pour l'Industrie de l'Aluminium, Neuhausen, Switzerland. By Professor Dr. A. Von Zeerleder	47-50
Laboratories for the British Non-Ferrous Metals Research Association, New	87-89
Laboratory, National Physical	92
Lead-Bearing Steels, Free Machining	95-98
M	
Management and Production Control, Industrial. Part VII. Control of Wages. By F. L. Meyenberg	5-7
Management and Production Control, Industrial. Part VIII. By F. L. Meyenberg	59-62
Mill, Construction and Operation of the First German Wide-Strip.	77-78
Machining Lead-Bearing Steels, Free-By L. Sanderson	95-98
Manifold Uses of Steel, The. By Dr. W. H. Hatfield	102
Modern Tool Steels. By L. K. Everitt, B.Met.	114
Machinery, Application of Alloy Cast Irons to Crushing and Grinding. By L. Sanderson	126
Management and Production Control, Industrial. Part IX. Improvement of Organisation and Production by Means of Modern Methods of Industrial Administration. By F. L. Meyenberg	137-139
Mining Plant and Equipment	142
Mild Steel, Influence of the Resiliency of the Test Machine and of the Loading Speed upon the Determination of the Yield Point for. By G. Welter and S. Gockowski	143-148
Metals, Internal Strains in	149-150
Management and Production Control, Industrial. Part X. Planning and Progressing. By F. L. Meyenberg	163-165
Marine Engineering, Steels in	165
Metals, the Institute of	184-186
Machinability of Some Non-Ferrous Metals and Alloys	187-189
Manganese	197-198
Metallography—Sorby, the Originator of. By a Special Contributor.	201-202
Management and Production Control, Industrial. Part X. Planning and Progressing. By F. L. Meyenberg	203-206
Materials in Germany's Iron and Steel Industry, Raw	207-208
Metals in Phosphorus Producing Plant, Corrosion of	214
Metal Control, Non-ferrous	222
N	
Nickel-Chromium Wear-Resisting Cast Iron Alloys, Experiments with. By J. E. Hurst	1-4
New Pulverised Fuel Works at Brancepeth	81-83
New Laboratories for the British Non-Ferrous Metals Research Association	87-90
National Physical Laboratory, The	92
Ninth Report of the Heterogeneity of Steel Ingots	178-179
Non-Ferrous Metals and Alloys, Machinability of Some	187-189
New British Chemical Standards.	198
Non-Ferrous Metal Control	222
O	
Operation of First German Wide-Strip Mill, Construction and	77-78
P	
Production Control, Industrial Management and. Part VII. Control of Wages. By F. L. Meyenberg	5-7

Page

Photographic Emulsion and its Contribution to Science and Industry, The	9
Processes, Controlled Atmospheres in Heat-Treatment. By F. W. Haywood, B.Sc., Ph.D., F.I.C.	13-19
Potentiometers as a Means of Temperature Measurement and Control. By W. R. L. Kent, B.A., A.M.I.E.E., A.M.I.Mech.E.	31-34
Presses, Developments in Electric Billet-Heating Furnaces for Extrusion. By Dr.-Ing. H. Lindner.	53-56
Production Control, Industrial Management and. Part VIII. By F. L. Meyenberg	59-62
Post Congress Works Visits	73-76
Pulverised Fuel Works at Brancepeth, New,	81-83
Production of Sound Castings, Chemistry as an Aid to the. By E. Altenhein, D.Eng.	99-100
Power Plant, Steels for. By H. H. Burton	111-113
Plant, The Use of Steel in Heavy Works. By W. Reid	125-126
Production Control, Industrial Management and. Part IX. Improvement of Organisation and Production by Means of Modern Methods of Industrial Administration. By F. L. Meyenberg	137-139
Production Control, Industrial Management and. Part X. Planning and Progressing. By F. L. Meyenberg	163-165
Production South Wales, Iron and Steel	166-172
Pig-Iron Grading Scheme	200
Production Control, Industrial Management and. Part X. Planning and Progressing. By F. L. Meyenberg	203-206
Power, Aluminium and Highland Water	209-210
Properties of Cast Iron, Elastic.	213-214
Phosphorous Producing Plant, Corrosion of Metals in	214

R

Report of the Alloy Steels Research Committee, Second	8-9
Recent Heat-Treatment Furnace Installations, Some	23-30
Refractories for Heat-Treatment Furnaces, Specially Contributed.	35-36
Report of the Heterogeneity of Steel Ingots, Eighth	44
Report on Refractory Materials, First	62
Research and Development	91
Railways, Steels Used in the British. By H. Turner	103-104
Resins, Containers for Synthetic	132
Resistance, Creep	133
Radium Industry	154
Recent Research on Copper Alloys. By A. Behr, B.Sc.	157-158
Report on the Heterogeneity of Steel Ingots, Ninth	178-179
Raw Materials in Germany's Iron and Steel Industry	207-208

S

Second Report of the Alloy Steels Research Committee	8-9
Science and Industry, The Photographic Emulsion and Its Contribution to	9
Some Recent Heat-Treatment Furnace Installations	23-30
Steel Ingots, Ninth Report of the Heterogeneity of	44
Société Anon. pour l'Industrie de l'Aluminium, Neuhausen, Schwiez. The Laboratories of the. By Professor Dr. A. Von Zeerleder	47-50
Silicon-Carbide Additions to Cast Iron	83
Standardised Aluminium Alloys in the United States. By Robert J. Anderson, D.Sc.	93-94

	Page
Steels, Free-Machining Lead-Bearing	95-98
Sound Castings, Chemistry as an Aid to the Production of. By E. Altenheim, D.Eng.	99-100
Steel. By W. J. Brooke	101
Steel, The Manifold Uses of. By Dr. W. H. Hatfield	102
Steels Used in the British Railways. By T. H. Turner	103-104
Steels in the Automobile and Aeronautical Industries. By Dr. W. H. Hatfield, F.R.S.	107-108
Steel Tubing, Application of. By a Special Contributor	109-110
Steels for Power Plant. By H. H. Burton	11-113
Steels, Modern Tool. By L. K. Everitt, B.Met.	114
Shipbuilding Steels. By Dr. J. N. Donaldson	115-116
Steel Wire. By Alastair T. Adam.	117-118
Steels, Trends in the Development of Alloy. By Ed. Houdremont.	121-123
Steel in Heavy Works Plant, the Use of. By Wm. Reid	125-126
Steels in Structural Engineering. By Wm. Ashcroft	129-132
Synthetic Resins, Containers for.	132
Standardised Aluminium Alloys in the United States. By R. J. Anderson	140-142
Steel, Influence of the Resiliency of the Test Machine and of the Loading Speed upon the Determination of the Yield Point for Mild. By G. Welter and S. Gockowski.	143-148
Strains in Metals, Internal	149-150
Soda, Treating Cast Iron with Caustic	153-154
Steels in Marine Engineering	165
Steel Production in South Wales, Iron and	166-172
Steel Ingots, Ninth Report of the Heterogeneity of	178-179
Some Work on Clydeside	180-184
Some Non-Ferrous Metals and Alloys, Machinability of	187-189
Standardised Aluminium Alloys in the United States. By Robert J. Anderson	189-191
Standards, New British Chemical ..	198
Sorby—the Originator of Metallography. By a Special Contributor.	201-202
Steel Industry, Raw Materials in Germany's Iron and	207-208
Steel Industry Control, Maximum Prices in the Iron and	220-221
T	
Temperature Measurement and Control, Potentiometers as a Means of. By W. R. L. Kent, B.A., A.M.I.E.E., A.M.I.Mech.E.	31-34
Tinplate and the Canning Industry. By W. E. Hoare, B.Sc.	105-106
Tubing, Applications of Steel. By a Special Contributor	109-110
T	
Trends in the Development of Alloy Steels. By Ed. Houdremont.	121-123
Treating Cast Iron with Caustic Soda	153-154

	Page
U	
United States, Standardised Aluminium Alloys in the. By Robert J. Anderson	93-94
Uses of Steel, the Manifold. By Dr. W. H. Hatfield	102
Use of Steel in Heavy Works Plant. By W. Reid	125-126
United States, Standardised Aluminium Alloys in the. By R. J. Anderson	140-142
United States, Standardised Aluminium Alloys in the. By Robert J. Anderson	189-191
W	
Works, Visits, Post-Congress	73-76
Wide-Strip Mill, Construction and Operation of the First German.	77-78
Works at Brancepeth, New Pulverised Fuel	81-83
Wire Steel. By Alastair T. Adam.	117-118
Works Plant, The Use of Steel in Heavy	125-126
War	161
Works on Clydeside, Some	180-184
Water Power, Aluminium and Highland	209-210
Wire Heat-Treatment Furnace, Automatic Control of Gas-Fired. By O. G. Pameley-Evans, B.Sc., A.I.C.	217-218
Y	
Yield Point for Mild Steel, Influence of the Resiliency of the Test Machine and of the Loading Speed Upon the Determination of the. By G. Welter and S. Gockowski	143-148
BUSINESS NOTES AND NEWS.	
Iron and Steel Industry Increase Output	45
Shipbuilding Orders	45
Tinplate Merger	45
World's Heaviest Ingot Mould	45
Scrap Conservation	45
Index on Spectrographic Analysis ..	45
Sheffield Honours Her Sons	85
New Electrode Plant at Niagara Falls, New York	85
Gas Developments	85
Supplementing Holiday Pay	85
Mallory Metallurgical Products	85
Avoidance of Double Taxation	85
Presentation to Mr. W. B. Lake ..	127
Further Progress in Iron and Steel Industry Production	127
Shipbuilding Expansion	127
New Non-Ferrous Tube Works Proposed	127
Honeywell Brown New Offices and Works	127
Sub-Station Equipment for L.N.E.R. Suburban Inspection ..	127
International Air Congress	127
G.E.C. Employee's with the Forces Output of Steel Continues on High Level	159
Duffield Iron Corporation	159
Yorkshire Gas Grid	159
Europe's Largest Bessemer Shop ..	159
Barrow Hematite and Colvilles	159

	Page
Langley Alloys	159
Lloyds Register Scholarships in Marine Engineering	159
State Aid and British Shipping	159
Wild-Barfield New Premises	192
Industrialisation of the Soviet East.	192
Trolley Buses for Durban	192
Scottish Steel Works Busy	192
Deposits of Lead, Coal and Tin Found in North Kazakhstan	192
The Institution of Mechanical Engineers	192
Richard Thomas & Co., Ltd.	192
United Steel Companies Ltd.	219
Vickers Interim Dividend	219
Increase in Tin Quota	219
North-East Coast Institution of Engineers and Shipbuilders	219
Shipping Register	219
Institution of Engineers and Shipbuilders in Scotland	219
Tin Consumption in the First Seven Months of 1939	219
RECENT DEVELOPMENTS IN MATERIALS, TOOLS AND EQUIPMENT.	
Fofumi Rotary Melting Furnace ..	37
Creolite for Soviet Aluminium Industry	50
New Stampings Factory	76
Kursk Magnetic Company	76
New Deposits of Bauxite in Urals ..	76
Grinding Cemented Carbides	78
New Electric Billet-Heating Furnace ..	119
New Four-High Cold-Strip Mill Plant	119
Bending and Forging Presses	120
Illuminated Magnifier	151
A New Steel Electrode	151
Wilco Wiggins Resistance Thermometal	152
Aluminium Inserts for Blast-Furnace Cooling Boxes	152
A New Shock-Resisting Steel	215
A Small Tumbler Machine	215
New Hard-Facing Electrode	215
Propagas	215
Gas-Fired Foundry Ladle-Heating Equipment	216
Metal Spraying	38
Qualitative Inorganic Analysis	38
A Treatise in Tool Grinding	76
Diesel Locomotives and Railcars ..	76
A.S.T.M. Specifications for Pipe and Piping Materials for High-Temperature and High-Pressure Services	124
A Practical Manual of Chemical Engineering	155
Lead-Bronze Bearings	156
Nickel Cast Iron Data Book	156
Catalogues and other Publications ..	156
Transactions of the American Institute of Mining and Metallurgical Engineers	193
Aluminium Engineering Sections ..	193
What is Steel?	193
Semi-Conductors and Metals	212
Protective Coatings for Metals	212
Welding of Cast Iron	212
CORRESPONDENCE.	
Potentiometers as a Means of Temperature Measurement and Control	52

